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Comparison of American and Norwegian Nursery School Children on Independence Behavior and Training.
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Descriptors-*American Culture, Comparative Analysis, *Cultural Differences, Cultural Traits, Individual Development, Mother Attitudes, *Norwegian, *Preschool Children, *Self Care Skills, Self Control, Student Teacher Relationship, Task Performance, Training Techniques
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To compare independence training and cultural expectations of independence training among American and Norwegian nursery school children, this study hypothesized that (1) cultural expectations of independence are greater for Norwegian children than American, (2) such expectations are greater for girls, (3) children's independent behavior and parental expectations are positively correlated, and that (4) Norwegian children would be more self-reliant. Mothers were given two questionnaires which assessed cultural expectations and child rearing practices in independence training. Thirty-four nursery school children of the upper-middle class (Norwegian: nine boys and eight girls; American: 10 boys and seven girls) were involved in two simple tasks with the mother and investigator and two difficult tasks with the investigator. The data were analyzed by T-tests, analysis of variance, and intercorrelation programs. The results supported all hypotheses but one. American boys were found to be subject to greater cultural expectations than were the girls. The conclusions suggested the differences might be due to cultural pressure, not training. Data are tabulated and an extensive bibliography is appended. (JS)

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Chapter I

A. Problem

The degree of independence displayed by children is a crucial factor in the teacher-pupil relationship and in the teacher's management of the learning situation. National differences in children's independence and independence-training are important factors in actual and ideal patterns of education.

Informal observation as a pre-school teacher in Norway and America has suggested to me that there are quite important national differences in independence-training and in the resulting dependency behavior of preschool children.

The present study is an effort to test these observations on national differences in a precise and controlled fashion, and to analyze some of the factors which might cause them.

In the present study, independence is defined as the tendency to perform tasks of varying difficulty without seeking help (verbally or non-verbally) from a nearby adult.

The child's independence is hypothesized to be related to the extent of mother's independence-training, defined as training of the child to perform routine activities and tasks by himself.

The objectives of the study, then, were:

1. To compare Norwegian and American preschool children with regard to dependency which they exhibit in task-situations with a stranger and with their mothers.
2. To compare cultural differences in mothers' expectations of independence and their report of independence-training for their children.
3. To examine relations between maternal independence-training and expectations and children's independence behavior in the two national groups.

Hypotheses:

1. It was hypothesized that independence-training would be practiced earlier by mothers of Norwegian children; that these subjects would be expected to do things by themselves at an earlier age than American children, and that they would be given more opportunity to practice self-reliance and decision-making.
2. In a task situation, the Norwegian children, being trained earlier to independence, would be less help-seeking.
3. Parental independence-training or expectations and children's independent behavior should be positively correlated within each national group.
4. It was hypothesized that sex differences also would be reflected in the general cultural expectations of the children's readiness for and capability of certain tasks at certain ages--the girls being expected to be capable earlier

than boys; that the sex difference would also be expressed in the mothers' childrearing practices.

B. Previous Research

The present study accepts Rosen and D'Andrade's (1959) distinction between achievement-training and independence-training. Achievement training ("to do things well") is considered to be distinct from independence training ("to do things by himself"). Accepting Rosen and D'Andrade's distinction, this investigator has included their concept of autonomy, "freedom in decision-making," as one component of independence-training.

Our study also accepts Heathers' (1955) distinction between emotional and instrumental independence. Concentrating upon the latter, Heathers defines instrumental independence as "conducting activities and coping with problems without seeking help." The extent to which a child persists in the task without asking for help may be taken as a measure of his instrumental independence.

Whiting and Child (1953), in their analysis of the cross-cultural material, found that the period of independence-training of American middle-class children began at age 2½ (while the median age in all societies was 3½)and lasted longer than training to independence in primitive societies. Independence-training of American children was rated both as mild and severe. It was severe with regard to expectations that the child act on his own initiative independent of adult surveillance, but mild in regard to expectations for responsibility in taking on adult role in the household economy.

Leonore Baehm (1960) in a comparative study of development of independence in American versus Swiss children, implicitly used cultural attitudes and norms regarding the differences in social development. By Piagetian methods and interviews, she found some support for her hypothesis that American children were "emancipated" from parents at an earlier age than Swiss children. Making a distinction between independence toward adults and independence toward peers, Baehm found that American children showed more independence towards adults than Swiss children of the the same age, but that they also were more dependent upon peers than Swiss children were. Baehm's distinction between dependency upon adults and dependency upon peers seems supported by the findings of Marshall and McCandless (1957); that among nursery school children who had attended nursery school for some time, there was a consistent negative relationship between dependency scores and measures of peer social acceptance. Rosen and D'Andrade (1959) have also found Americans higher in independence.

With regard to relations between severity of parental expectations and training toward independence and the actual independence of the child, both theory and findings are complex.

McClelland (1953, 1961), finds a paradox--if parents demand self-reliance, the child may become more dependent.

A study by Sears, Maccoby and Levin (1957) supports this--they found that punishment for dependency by the mother made the child more dependent.

Most studies find that mother's warmth is not related directly to the child's independence. [Sears, Maccoby and Levin (1957); Winterbottom (1953, 1958).]

Baumrind, in her study of "Child Training Antecedents of Pre-School Behavior," finds, however, that "parental control and nurturance should both be high, to produce self-sufficiency in young children."

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Chapter II

Method

Sample

The 34 subjects for this study were carefully selected (by their nursery school teachers, after the given criteria) to get samples as closely matched as possible, with comparable economic and environmental conditions.

The American sample was, therefore, not from a large city, but from a smaller city, New Haven, Connecticut. The children lived in suburban areas, under conditions similar to those of the suburban nursery school children in Bergen and Oslo (Populations 150,000 and 500,000).

The design of the study involved equating the Norwegian and American sample on the following criteria:

1. Sex: (9 boys, 9 girls, in each group*).
2. Age: 4; 6 to 5; 0 at time of testing.

   (Mean age of American children was 4.76 years, Norwegian children 4.78 years).
3. Socio-economic status: "Upper middle-class"--defined by father's education, university level, and profession.

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*Various problems led to reduction of the final sample, to 8 girls and 9 boys in the Norwegian sample, and 7 girls and 10 boys in the American group.

4. Attending nursery school.
5. Mother not working outside of home.
6. I. Q. between 110-135.
7. Sibling group consisting of 2-4 children.

I.Q. was determined by Quick-Test (Q.T.) a picture-vocabulary test (Ammons and Ammons, 1962), and the Draw-A-Man Test (Goodenough-Harris, 1963).

Because of the unsolved problem of finding a cross-culturally standardized measure of intelligence which could be used equally well with both samples, these instruments, which would not be too time-consuming, were chosen, since the investigator could only hope for one visit with each child.

The mean I.Q. of all Norwegian children on the Goodenough-harris Test was 136.94, of the Americans mean I.Q. was 133.69. By sub-groups, I.Q.'s were as follows:

Norwegian girls: $\bar{x}$ 133.75.
Norwegian boys: $\bar{x}$ 139.78
American girls: $\bar{x}$ 130.57
American boys: $\bar{x}$ 135.22.

The Quick-Test, a picture vocabulary test, had three forms, of which the words were translated into equivalent Norwegian wording.

Mental Age means for sub-groups were:

Norwegian girls: $\bar{x}$ M.A. 4.5
Norwegian boys: $\bar{x}$ M.A. 5.4

*American girls: $\bar{x}$ M.A. 4.25

American boys: $\bar{x}$ M.A. 4.3

(See also Appendix B, Discussion on I.Q. Measurements.)

Procedure

Questionnaires

Two questionnaires were administered to the mother of each child:

1. Questionnaire I - to assess culturally expected standards for independence-training.
2. Questionnaire II - to assess the mother's child-rearing practices with this particular child at the present time.

1. The first questionnaire presented 26 tasks which a young child at present age is, or soon will be, confronted with (See Table 1 A, Appendix A.) It was headed with the question: "At what age do you expect a child (any child) to be able to ______"; and the mothers were supposed to put down a given age as answer to each task or situation. This questionnaire was based on Winterbottom's (1953), but was modified, because the children in the present study were 3-3½ years younger than Winterbottom's sample and because the questions had to be equally fit for and applicable to the American and the Norwegian sample.

2. The second questionnaire presented to the mothers

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*Mean of 6 S's scores. One S had only 2 forms completed.

included 23 different situations or tasks, similar to the ones listed in Questionnaire I. In Questionnaire II, however, each situation was given three different "outcomes"; suggested solutions in the situation (See Appendix B).

These outcomes were the following:

a. One solution was a possibility for the child to act independently in the situation or task.

b. One outcome was structured in such a manner that the child was passive, or dependent upon the mother in the given situation.

c. The third solution was, in most cases, a "neutral" situation, or a mother-child interaction.

Each mother was presented this questionnaire with the words: "I know all mothers have to choose any of these solutions, at times. Please check the one solution which you use most, or most often."

The items in both questionnaires were chosen in advance, to cover seven categories which were supposed to cover most areas in the preschool child's daily life and experience:

1. Physical care--including feeding, dressing, toileting.
2. Play, indoors and outdoors.
3. Responsibility and care for own property.
4. Samll jobs or duties, responsibility and care for family property.
5. Care and responsibility for sibling.
6. Achievement--e.g., encouragement to do what older siblings can do.

7. Autonomy--a certain freedom in decision-making.

Later, an eighth category was included, "general care-taking," as some questions indicated differentiation of care-taking by mother and by other persons.

Two American graduate students were asked to sort the items into the different categories, after a general discussion in which the raters had agreed to add category eight, "general care-taking."

Agreement on categorizations was 69 per cent for Questionnaire I and 87 per cent for Questionnaire II. The three raters (including the investigator) then sorted the items on the two questionnaires into eight categories and also rated the three outcomes of each of the 23 questions or tasks in Questionnaire II into three subgroups:

I. Independence
II. Dependency
III. Neutral, or mother-child interaction.

Per cent agreement on categorizing outcomes was 93 per cent.

Task situations

Each child was visited once, and was seen in his own home. The visit was pre-arranged with the mother, who was present and introduced the examiner.

The following experimental situations were used to elicit dependence behavior from the children:

1. Stringing of small beads on shoelace. (Involving child, mother and investigator.)

2. Easy puzzle-- 11 pieces. (Involving child, mother and investigator.)
3. Making tower of 15 1-inch wooden cube blocks. (Involving child and investigator.)
4. Difficult puzzle--22 pieces. (Involving child and investigator.)

These task-situations were designed so that difficulty increased from task 1 to task 4. While the mother was not expected to be present during the last two tasks, four of the American mothers remained through all tasks to reassure their children.

Ratings of Task-situations

The experimenter recorded the subjects' behavior during the task-situations. Recordings of the sessions were made so that verbal dependency behavior could also be rated by the experimenter and by a co-rater, from the tapes.

The categories of responses recorded were as follows:

1. Child asks verbally for help
2. Seeks attention or approval
3. Asks for general information
4. Neutral comments--statements of information in general
5. Asks for information about task
6. Comments related to task
7. Statements of difficulty of task
8. Tries to leave situation (verbal escape)
9. Rejects mother's offer of help
10. Accepts mother's suggestions

11. Accepts mother's direct help
12. Leaves task--temporarily
13. Leaves task
14. Stops working, hesitates
15. Physical indication of need and want of help in task
16. Need of physical support and security
17. Inaudible muttering
18. Task self-guidance
19. Describing own activity
20. Questions answered by self
21. Commanding objects
22. Repetition
23. Crying or whining
24. Sighing
25. Singing, humming
26. Laughter
27. Meaningless sounds

For certain purposes, 13 categories of verbal responses were grouped into the following categories: (Also used by Kohlberg and Zigler, (1967).

Category I - Task Dependency, included five items: #1; #2; #5, #6 and #7.

Category II - Non-Task Dependency, included two items: #3 and #4.

Category III - Egocentric Speech, included six items, #17-#22.

The responses of all subjects were both hand-recorded and tape-recorded. Only 10 of the tape-recorded responses of the American subjects were rated for the reliability measure. It proved too difficult for the American-Norwegian rater to understand the Norwegian dialects from the tapes. The raters decided that the best procedure for obtaining the full responses from the tapes and accordingly, the most correct ratings, was to transcribe the tapes and to rate the behavior from this transcription. This was done independently by the two raters, one in Connecticut and one in Chicago. The non-verbal behavior items were rated only in the experimenter's hand-recording.

Reliability of Ratings

The correlations between the two judges' ratings of the 10 transcribed tapes were as follows:

Category I - Task-Dependency	r = + .93
Category II - Non-Task Dependency	r = + .81
Category III - Egocentric Speech	r = + .90
Total Dependency	r = + .90

The investigator's ratings of the tapes for total verbal dependency were then correlated with the hand-recorded ratings, done three months earlier. This correlation was + .97.

T-Test on Questionnaire I

For the age-span responses, the median of each was set up as the mother's response to this specific question. All responses given in years were converted into months, and the mean age in months was found for each of the 26 items, in the four sub-samples of children. (Table 1A and 1B, Appendix A.) Table 1C presents the Total Mean Age Score, over the 26 items, by Nationality and by Sex, and the results of two sample t-tests on these data.

Table 1C. Expected Mean Age Scores, Questionnaire I

2 sample t-test, by Nationality and by Sex, of Mean Total Score.

By Nationality:	All Norw.	All Am.
	$N = 17$	$N = 16$
	$\bar{x} = 49.971$	$\bar{x} = 58.218$
	$t = 3.459$	
	$.001 < p < .005$	
By Sex:	All Girls	All Boys
	$N = 15$	$N = 18$
	$\bar{x} = 52.365$	$\bar{x} - 55.306$
	$t = 1.06$	
	$.1 < p < .2$	

Comparison of Mean Ages

Table 1A presents the four subgroups' Expected Mean Ages for the 26 items and for the sum of the items, together with significance levels found by t-tests for nationality differences. (Table 1A and B, Appendix A.)

The Norwegian girls had 21 of the 26 lowest means. All Norwegians had 23 lowest means versus all Americans with 3 lowest means

American versus Norwegian Children

Two sample t- tests were done on most of the 26 items, on American versus Norwegian children--and Girls versus Boys--to test for significant differences both in cultural expectations and sex differences. In some cases the group means were so similar that testing would not yield any results.

On nine out of 26 items, significant probability levels ranging from .05 to .001 were found. Eight of these mean differences showed that Norwegian children were expected to show independence on tasks considerably earlier, in these situations.

T-Tests on Questionnaire II

The statistical analysis on these data was also done with t-tests of two sample means. The raw scores given by the mothers(Q II, see Appendix B) were used directly. They were scored in categories and were summed up for individuals and for subgroups.

Table 2 Questionnaire II,

Subgroup and Total Mean Scores for Each Category

		Norw. Girls	Norw. Boys	Am. Girls	Am. Boys	All Norw.	All Am.
		N = 8	N = 9	N = 7	N = 10	N = 17	N = 17
Sub-category I Independence	$\bar{x}$	12.88	11.33	6.29	6.5	11.5	6.4**
Sub-category II Dependency	$\bar{x}$	2.38	3.0	6.43	6.1	2.7	6.2*
Sub-category III Neutral, or Interaction	$\bar{x}$	7.0	8.78	9.57	9.1	7.9	9.3

* $P < .05$

** $P < .001$

CHAPTER III

ANALYSIS AND FINDINGS OF DATA

Seven analyses were performed on the data. They are:

1. An analysis of variance with weighted dependency scores from task-situation measures
2. An analysis of variance with unweighted dependency scores from task-situation measures
3. An analysis of variance with unweighted ratio-scores from task situation measures
4. T-test on Questionnaire I
5. T-test on Questionnaire II
6. Inter-correlation program with 68 variables utilizing combined data from task-situations (1-4), Q I (. . . . . . . Mean Age scores), Q II (Mean Independence scores and Mean Dependency scores)
7. Inter-correlation program with 18 variables utilizing combined ratio-scores from task-situations, (1-4) Q I (Mean Age scores) Q II (Mean Independence scores and Mean Dependency scores)

Analysis of Variance with Weighted Dependency Scores (Analysis I)

An analysis of variance was first performed with weighted dependency scores. (This was done by Gene Fox, graduate student at The University of Chicago, 1965. Computer program Anova was used for this analysis.) See Table 3. The scores were weighted in accordance with the Kohlberg and Zigler Dependency Rating Scale.

Table 3--*Analysis of Variance I: Analysis with Weighted Scores Per Task and Per Category* (significant effects only)

		Nationality	Sex	Interaction
Task I	Task Dependency	f = 7.359*	-	-
Task IV	Task Dependency	f = 7.1992*	-	-
Total	Non-Task Dependency	f = 4.5599**	-	-

Only two of the findings were of any statistical significance: Task Dependency in Task I and in Task IV x Nationality yielded results respectively of F - 7.3590 and F = 7.1992, both with $p < .05$. Total Non-Task Dependency x Nationality reached almost a level of significance. Sex and Interaction showed no results.

This analysis per task was not adequate. Attempting to use an analysis that would yield more informative results, (performed by Valerie Klinge, Yale University, 1966, analysis of variance based on Lundquist Type VI) an analysis of variance with unweighted raw scores was computed. See Table 4, Appendix A.

Analysis of Variance with Unweighted Dependency Scores (Analysis II)

In this analysis, "Task" (Task-situation I-IV), "Score," (Task Dep. Score-Non-Task Dep. Score and Egocentric Speech)

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* $p < .05$
** $.05 < p < .1$

"Nationality," and "Sex" were used as variables.

Four of the results reached a significance level of $p < .001$:

1. Within tasks, where a difference and increase of dependency was expected, as the tasks became more difficult;;
2. Score--a significant difference between the three groups of dependency scores--TD-NTD and Egocentric Speech;
3. Task x Score interactions showing difference in the dominance of categories in the four tasks;
4. The National effect upon Task x Score.

Essentially, these data corresponded with the Analysis of Variance using the weighted scores, where Task I and Task IV had the highest (significant) Dependency Scores, and where Nationality had a dominant effect.

In neither analysis did sex have any effect. While either analysis clarifies some of the differences, either one probably also obscures or magnifies some of these. See also Tables 5A and 5B, Behavior Items Mean Scores, Appendix A.

Although the differences between the group means for length of time in each task were not large (see Table 16; Mean Time in Minutes per Task per Subgroup, Appendix A), it seemed important to compute also the ratio scores--total individual scores divided by the individual's number of minutes per task. The effect of shorter or longer time spent on tasks would thus be separated out.

Analysis of Variance with Ratio-Scores (Analysis III)

The ratio-scores were used in a third analysis of variance (see Table 6, Appendix A). In this analysis, the investigator re-grouped the items--thus, "Task-Dependency" is here #1, 2, and 7, and "Curiosity--Wants and gives information" contains #3, 4, 5, and 6. "Total Verbalization" includes all these items plus items #18-22. Number 17, "Inaudible muttering," is not a verbal item, strictly speaking, and was not included.

This analysis (also done by Valerie Klinge, Yale University, 1966, Anova computer program) was done in three parts.

Part one, Analysis of Task Dependency, (items #1, 2, and 7) yielded no significant results between S's. Sex and Nationality x Sex had probability levels $p < .1$.

Within S's, variance of Task gave a significant result of $p < .001$. Task x Nationality had $p < .1$.

Items #3, 4, 5, and 6 were combined in part two of the analysis--Curiosity-Wants and gives information. Between S's, there was a statistically significant result of Nationality, $p < .025$.

Within S's, Task reached a significance level of $p < .001$, and Task x Nationality $p < .05$.

In part three of the analysis of variance, Total Verbalization, items #1-7 and #18-22 were combined. Only Task, within S's, reached a significance beyond $p < .05$.

Inter-correlation of Data (Analysis 6)

A correlation program was first set up with 68 variables (done by Valerie Klinge, Yale University, 1966, Department of Psychology). All the information from Questionnaire I and Questionnaire II, as well as the Dependency scores in the three categories Task Dependency, Non-Task Dependency, and Egocentric Speech, were used. Mother's presence or absence in the tasks, and the dependency to mother and to examiner, were also used as variables.

The correlations were set up in nine series:

Norwegian v. American children	(2 series)
Girls v. Boys	(2 series)
All Sub-groups separately	(4 series)
All Subjects--as one group	(1 series)

Findings Related to Questionnaire I--Mean Age = Variable #66

Questionnaire I had 26 questinns, and variable #66, mean age, is the total mean from these scores. This mean (age-scores given in months) is expressing the cultural expectancies of the children to earlier or later independence-behavior and is thus one of the key variables in the present study.

The second questionnaire (Q II) given to the mothers was given to assess the individual mother's training to independence of the subjects in this particular study. It was therefore of major interest to the investigator to correlate the Independence score (Var. #67) and the Dependency score (Var. #68) obtained in Questionnaire II with the Mean Age-score in Questionnaire I; to look for relationships between cultural standards and personal expectancies of the child. See Tables 7A and 7B, Appendix A.

Nationality. A correlation for all subjects proved highly significant. These two variables run in opposite directions, so a negative correlation was therefore expected between Low Mean age and High Independence score, and between High Mean age and Low Independence score.

Both national groups had correlations which reached significant levels of probability. These results were also confirmed by the T-tests. Relating these correlations to the T-tests of Mean Age scores and T-tests of Independence scores (Table 1B, Appendix A, and Table 2, Chapter II), one is aware of the opposite trends in the two national groups--Norwegian children-High Independence-Low Mean Age; American children-Low Independence-High Mean Age.

Sex. The relationship between the two variables reached significant levels also where subjects were divided according to sex. Looking at the sub-group correlations, however, one finds that the American Girls and the Norwegian Boys have the highest (both significant) correlations; contrasted are the American Boys, where there is almost no relationship between these two variables.

Mean Age x Dependency Score. (Table 7, Appendix A.) The mean age score was also correlated with the Dependency score, which is not really an inverse of the Independence score (see description of sub-groups, Questionnaire II, Chapter II). It represents the subjects' dependency upon their mothers in given tasks or situations.

A positive correlation was here expected, between Low Mean age score and Low Dependency and between High Mean age score and High Dependency.

The correlation for all subjects was significant with $p < .005$.

Nationality. Neither of the correlations for the two national groups yielded results at significant levels. The sub-group scores demonstrate clearly how, within each national group, one high and one low sub-group score counteract each other.

Sex. The correlation for both All Girls and All Boys reached significant levels of respectively $p < .01$ and $p < .05$. Here again, the sub-groups of Norwegian Boys and American Girls have the highest correlations, while American Boys have only a very small, and negative, correlation between these variables.

Correlations of Mean Age with Independence Score and Dependency Compared with T-tests. Referring to the T-tests of Mean Age (Q I, Table 1b, Appendix A) and T-tests of Independence and Dependency scores (Q II, Chapter II) it is evident that the two Norwegian sub-groups have a high correlation between Low Mean Age and High Independence Score, while American Girls have a strong relationship between High Mean Age and Low Independence Score.

For Norwegian Boys, there is a high correlation between Low Mean Age and Low Dependency Score, while American Girls show a significant relationship between High Mean Age and High Dependency Score.

The relationships between Mean Age as the culturally expected standard and the Independence and Dependency scores as the mothers' actual practice were found to be significantly related for All Subjects. Mean Age correlated with Independence Score had significant results, both for Nationality and Sex, while correlated with Dependency Scores had significant results only related to sex.

Intercorrelation I. Task Dependency to mother and to examiner, correlated with:

A. Q I Mean Age Score
B. Q II Independence Score
C. Q II Dependency Score

Task Dependency was analyzed separately for each task. Since only a few mothers were present in Task III and Task IV, only the tables for the first two tasks are set up and compared. See Table 8, Appendix A.

Nationality. Positive relationship between Q I Mean Age x Task Dependency was expected. Table A shows that for All Norwegian Subjects there was, both for Task I and Task II, significant correlations between Mean Age Score and Task Dependency to Examiner. Task Dependency to Mother, however, correlated negatively for both tasks, and with a significant result for Task I.

For All American Subjects, Table A shows that there was one negative and one positive correlation for each task, none of which had significant outcome.

Sex. All Boys had positive correlations between Mean Age Score and Task Dependency to both Mother and Examiner, for both tasks. Task Dependency to Mother, Task II, was significantly related to

Q I, Mean Age.

For All Girls, three of the four correlations were negative; none of the four reached significance level.

The correlations (Table B, Q II) Independence Score x Task Dependency were expected to give negative outcomes, with High Independence Score x Low Task Dependency, or Low Independence Score x High Task Dependency.

Nationality. For both All American and for All Norwegian Subjects, three of the four correlations were positive.

For All American Subjects, Task Dependency to Examiner in Task I, the positive correlation reached significance level $p < .05$, while Task Dependency to Mother was negatively correlated and almost reached the same significant level.

For All Norwegian Subjects, Task Dependency to Examiner in Task I was correlated negatively with Q II Independence Score, and with highly significant results. The three other correlations were positive, however, and Task Dependency to Mother, Task I, and Task Dependency to Examiner, Task II, both reached significance levels beyond $p < .025$.

Sex. For All Girls, only one correlation was negative, zero; the other three were positive. Task Dependency to Mother, Task II, and Task Dependency to Examiner, Task I, reached levels of significance.

For All Boys, however, three of the four correlations were negative in the predicted direction. Task Dependency to Mother, Task I, negatively correlated to Independence Score, gave significant result.

Q II Dependency Score x Task Dependency to Mother and to Examiner were expected to show positive relationships. For All Subjects, however, the four correlations were all negative.

Nationality. Task Dependency to Examiner was, for All Norwegian Subjects, positively correlated to Dependency Score in both tasks. For Task II, the relationship reached a probability level of $p < .005$. The correlations of Task Dependency to Mother and Dependency Score were both negative.

For All American Subjects, only Task Dependency to Mother in Task I was slightly, but positively, correlated to Dependency Score. The correlation in Task II was negative and with significant result.

Sex. By sex, the predicted direction of relationship between Dependency Score and Task Dependency to Mother and to Examiner held up in three of four correlations. These were low, however, as was also the positive correlation of Dependency Score to Task Dependency to Mother in Task I.

For All Girls, all four correlations were negative; Task Dependency to Examiner in Task I and Task Dependency to Mother in Task II both reached levels of significance $p < .025$.

Inter-correlation Program with 18 Variables (Analysis VII)

A second inter-correlation program was run because this investigator was not satisfied with the grouping of items in the

Task Dependency and Non-Task Dependency categories. The raw data indicated that items #5 and 6 were related to #3 and 4. (See Discussion, Chapter IV.) The Behavior Rating list items were regrouped after consultation with the co-investigator. The investigators felt, also, that it would be desirable to use ratio-scores, instead of raw scores, as in the third analysis of variance, in order to avoid effects of differences in time spent.

The following table shows the differences in the sub-group means in the three categories Task Dependency, Gives and Wants Information, and Total Verbalization. (For sub-group ratio-scores per item per task, see Table 10, Appendix A. For individual means, also see Table 10, Appendix A.)

Table 9--Behavior Rating List Categories

A. Task Dependency Items

B. Gives and Wants Information

C. Total Verbalization

Sub-group means of ratio-scores (Number of responses per minute)

	All Am.	All Norw.	All Girls	All Boys	American Girls	American Boys	Norwegian Girls	Norwegian Boys
A. TD, #1 2, 7 combined	.492	.239	.385	.349	.486	.497	.297	.187
B. G & WI, #3, 4, 5, 6 combined	.836	1.405	1.175	1.077	.964	.747	1.361	1.443
C. TV, #1-7, #18-22 combined	1.892	2.390	2.194	2.099	1.901	1.886	2.450	2.335

Although there were clearly differences, in the predicted directions, these were not large enough so that a T-test of two sample means would show significant results.

Inter-correlation Program II had 18 variables, and ratio-scores were used. Table 11 shows that a re-grouping of items #3, 4, 5, and 6 could be justified. The six inter-correlations of these four items were significantly correlated, for All Subjects.

Nationality. For all Norwegian Subjects, three of the items were significantly related, and three items were correlated with $p < .01$.

For All American Subjects, however, only correlation of items #3 x #5 reached a significant level.

Sex. By sex, the differences were even more pronounced. While all six items were significantly inter-correlated for All Boys, only items #3 x #5 had significant results for All Girls, and #4 correlated with #5 and # 6 gave negative low correlations.

(See following page for Table 18, Inter-correlation of Items #3, 4, 5 and 6.)

Table 11--Inter-correlation II, of Items #3, 4, 5 and 6

"Wants and gives information"

Items	All Ss	All Norw.	All Am.	All Girls	All Boys
#3 x #4	.433	.717	.115	.039	.615
	$p < .01$	$p < .005$			$p < .005$
Items #3 x #5	.612	.599	.801	.533	.674
	$p < .001$	$p < .01$	$p < .001$	$p < .025$	$p < .005$
Items #3 x #6	.353	.382	.210	.054	.530
	$p < .025$	$.05 < p < .1$			$p < .01$
Items #4 x #5	.372	.616	.007	-.133	.725
	$p < .025$	$p < .005$			$p < .001$
Items #4 x #6	.247	.386	.017	-.164	.549
		$.05 < p < .1$			$p < .01$
Items #5 x #6	.406	.351	.279	.111	.632
	$p < .01$	$.05 < p < .1$			$p < .005$

The inter-correlation of the Task Dependency Items #1, 2, and 7 shows for All subjects a significant relationship between items #1 and #2 (see Table 12, Appendix A).

Nationality. While items #1 x 2 were significantly related for All American Subjects, items #1 x 7 reached almost $p < .05$ level for All Norwegians.

The correlation of item #2 with #7, however, was negative and low for both groups.

Sex. Items #1 x 2 were significantly correlated for All Boys, and item #1 correlated with #7 reached significant level for All Girls.

Correlation of items #2 with #7 was negative for both groups; item #2 correlated with #1 was negative also for All Girls.

Inter-correlations of Task Dependency Items and Information-Curiosity Items

Nationality. Table 13, Appendix A shows clear national differences. Items #1 and #2 were for All American Subjects significantly correlated with three of the four items in the Information-Curiosity category, while the same correlations for All Norwegian Subjects were low; negative or positive. Item #7, however, correlated significantly for All Norwegian Subjects with items #5 and #6, but only with #6 for All American Subjects.

Sex. The differences here were less clear. Item #1 correlated with #3, and #2 with #3 reached significant levels for All Boys. Not as high, but also statistically significant, was the correlation of #7 with #6.

For All Girls, however, items #2 x #4 correlated significantly.

See Table 14 on following page.

Table 14--*Q I Mean Age Score, Q II Independence Score, Q II Dependency Score, Correlated with Total Task Dependency and with Total Curiosity-Information Category*

	All Ss	All Norw.	All Amer.	All Girls	All Boys
Q I Mean Age x					
Total Task Dependency	.050	-.287	-.140	.201	.003
Total Curiosity-Information	.099	.364 $.05<p<.1$	-.170	-.269	.010
Q II Independence Score x					
Total Task Dependency	-.177	.068	.069	-.362 $.05<p<.1$	-.142
Total Curiosity-Information	.074	-.514 $p < .025$	.274	.320 $.05<p<.1$	-.088
Q II Dependency Score x					
Total Task Dependency	.160	-.157	-.035	.103	.206
Total Curiosity-Information	-.139	.567 $p < .01$	-.348 $.05<p<.1$	-.693 $p < .005$	.161

Nationality. For All Subjects, the relationships were low. For All Norwegian Subjects, Total Curiosity correlated significantly with Q II Independence Score and Q II Dependency Score, and a significant level of probability was almost reached in correlation with Q I Mean Age. The fact is, however, that none of the results were in the predicted direction!

For All American Subjects, three of the six correlations were in the predicted direction. Only one result was significant--Q II Dependency Score correlated negatively with Total Curiosity-Information category.

Sex. For All Girls, all six correlations were in the predicted direction. Q II Dependency Score correlated with Total Curiosity-Information gave a highly significant result. Q II Independance Score correlated with Total Task Dependency and with Total Curiosity-Information did almost reach significant levels with $p < .1$.

For All Boys, the correlations were all low, and not consistent in their direction.

Table 15 shows the relationships in Program I between the two main verbal categories, Total Task Dependency and Total Non-Task Dependency, and the correlations from Program II of Total Task Dependency (re-grouped) and the Curiosity-Information category (also re-grouped).

See following page for Table 15.

Table 15--Correlations of the Two Main Verbal Categories

	All Norw.	All Am.	All Girls	All Boys
Inter-correlations I Task Dependency x Non-Task Dependency (raw scores)	.519 $p < .025$	.197	-.070	.600 $p < .005$
Inter-correlations II Task Dependency x Curiosity-Information (ratio-scores)	.471 $p < .025$	.804 $p < .001$	.338 p almost .05	.385 $p < .05$

Chapter IV

CONCLUSIONS AND IMPLICATIONS

The assumptions of the study were that 1) Questionnaire I would assess cultural differences in expectations of independence and self-reliance of pre-school children, and 2) that Questionnaire II would express differences in mothers' child-rearing practices. These were both confirmed. Assumption 3), correspondence between the two questionnaires and a consistency between cultural expectations and the mother's training of the child, was also confirmed.

The general or culturally expected standards of the child's ability to perform certain tasks and freedom to make decisions in certain situations were in 23 our of 26 cases expected *earlier* of Norwegian than of American children. A sample T-test on the overall means showed this result to be highly significant, p .005. See Table 1c, and Chapter II.

The mother's training of the child to independence and self-mastery was expressed by Independence and Dependency scores. Norwegian children were given more independence and freedom of decision (sub-category I) and were less passive and less dependent upon their mothers than American children (sub-category II). T-tests showed that the two sample means were significantly different for both these sub-categories. See Table 3, Chapter II.

Assumption 4), that the mothers' responses would reflect cultural and sex differences, both in cultural expectations and in actual training and child-rearing, was partially confirmed.

Correlations between Q I Mean Age Score and Q II Independence Score and Dependency Score (see Table 7A and 7B, Appendix A) confirmed the relationship between the cultural standards and the actual child-rearing practices. By Nationality and by Sex, statistically significant results were obtained, correlating Q I Mean Age Score and Q II Independence Score.

Significant correlations were obtained between Q I Mean Age Score and Q II Dependency Score for All Subjects by Sex but not by Nationality.

The hypothesis that Norwegian children were expected to be independent earlier and were trained earlier to self-reliance and self-mastery appeared to be confirmed by the data. The hypothesis of sex differences, of girls being expected to be independent and being trained earlier to independence than boys proved to hold up in the predicted direction for the Norwegian sample. In the American sample, however, there were reverse and contradictory findings, some of which will be interesting to examine and discuss further.

The data from the Task-situations confirmed the hypothesis of Norwegian children being less help-seeking over all tasks. Group means from raw scores and group means from ratio-scores both showed national differences in Task Dependency. (See Table 5A and Table 5B, Appendix A.) There were, however, sub-group differences over the four tasks. The first analysis of variance, with weighted dependency scores, showed that Norwegian children had higher Task Dependency in Task I, but far less than American children in Task IV. (Table 5A shows that this high dependency in Task I was because of attention-seeking, item No. 2, not help-seeking.) An analysis of variance with unweighted scores corresponded essentially with these data, with increase in Dependency for harder tasks. National, but not Sex differences were exhibited.

The use of the Behavior Rating List and the Kohlberg and Zigler Dependency Rating Scale was agreed upon, a priori, by the investigator. During the experimental situation with the subjects, however, this investigator made the observation that the two Non-Task Dependency items (No. 3 and No. 4) and two of the Task Dependency items (No. 5 and No. 6) were either labeled incorrectly or not grouped correctly--or conceivably might fall into both of these categories.

Before the data were analyzed, the recording of the subjects' responses indicated that rating list items No. 3 "Asks for general information" and No. 4 "Neutral comments--statements of information in general" were overwhelmingly responses displaying either 1) interests in general, alert observations, and curiosity, or 2) interest in the equipment for the task situations (tape recorder, reels, etc.), or in the examiner's person, perhaps because the examiner was for the American subjects a foreigner, and for the Norwegian subjects a person coming from a distant and exciting country. These responses did not indicate attention or approval seeking--such responses were rated under item No. 2. Neither were they indications of verbal escape (No. 8). As the rating list was quite specific, with 27 categories (see Chapter II), this investigator felt one could distinguish between categories for dependency and categories for curiosity and general "academic" interest in objects or persons.

Item No. 5 "Asks for information about task" and No. 6 "Comments related to task" were grouped and scored under Task Dependency. The responses in these two categories seemed to this investigator qualitatively different from those in categories No. 1, No. 2, and No. 7, which were clear-cut Task Dependency responses. The responses to No. 5 and No. 6 were factual comments and requests for information about tasks. They could neither be interpreted nor scored as attention or approval seeking nor as an invitation to help. The questions in category No. 5, when responded to, would enable the child to work independently to solve the task problem; the responses to No. 6 were mostly factual remarks about the task, often sharing of information or observations with the mother or the examiner.

The raw scores showed that the Norwegian sample had an overwhelming majority of responses in categories No. 5 and No. 6, combined with relatively few (less than one-third of the total) in categories No. 1, No. 2, and No. 7 combined. The American sample had little more than one-third of the total responses in categories No. 6 and No. 5 combined. The distinct sample groupings of responses in these two clusters of items should probably be interpreted as an indication of two qualitatively different kinds of responses. (See Table 5A and 5B, Mean Scores, and Table 10, Individual and Sub-group Means of Ratio-Scores; Appendix A.)

The third analysis of variance used ratio-scores (responses per minute) over all tasks, and the categories were re-grouped with items No. 1, 2, and 7 in Task Dependency and No. 3, 4, 5, and 6 in Curiosity-Information "Wants and gives information." Total Verbalization contained the items in both these categories, as well as items No. 18 through 22. This analysis also showed significant results for Task and Task x Nationality in the "Task Dependency" category, and for Nationality, Task, and Task x Nationality in "Curiosity." For Total Verbalization, only Task showed significant results. Again there were no significant results by sex.

All three analyses of variance show, in fact, that Task Dependency changes according to tasks, and that there are national differences. The last analysis also showed the national differences, over tasks, in curiosity and information seeking.

The first inter-correlation program was run with the data from the Task-Situations in the first, a priori, grouping of items. The data and findings from the experimental task-situations were composed of varied factors, but only the most important need be discussed here.

While inter-correlations of Q I Mean Age Score and Q II Independence Score and Dependency Score showed clearly the relationship between these variables, it was difficult to relate these variables to the data from the task-situations, since the results were far from clear-cut.

While a general negative relationship was expected between the Mean Age Score and Task-Dependency, both to Mother and to Examiner, the data showed that for both nationalities the Mean Age Score was correlated positively to Task Dependency to one person and simultaneously negatively to the other. The main difference by nationality was the significant correlations for both Task I and Task II in the predicted directions, between Low and Mean Age Score and Task Dependency to Examiner for All Norwegian Subjects, while there was a significant negative correlation--between (low) Mean Score and (high) Task Dependency to Mother for Task I.

For all Americans, the correlations were low. While there was a positive correlation of Mean Age Score with Task Dependency to Mother in Task I, and negative to Examiner, this was reversed in Task II; thus, there was no predictable trend. By sex, there was significant correlation for Boys in the predicted direction between Mean Age Score x Task Dependency to Mother in Task II. This was the only sub-group in which most of the correlations were in the predicted directions.

In general, the correlations of Task Dependency to Mother and to Examiner with Mean Age Score and Independence and Dependency Scores show certain differences by Nationality, although these are not consistent.

The different trends by sex were far more marked and more consistent than were the national differences.

Using ratio-scores and re-grouping of categories (Table 9, Chapter II) and inter-correlating the behavior rating list items showed significant results--Category II (Curiosity-Information) for all S's, for all Norwegians, and for all boys. Items No. 1 and 2 (Task Dependency) were significantly related for all Americans and for All Boys, and items No. 1 and 7 gave significant results for All Norwegians and for All Girls.

The inter-correlations of Task Dependency Items with Curiosity-Items showed strong national differences, with items No. 1 and 2 significantly correlated with three of four Curiosity-Items for All American Subjects. These interesting results suggest that the first grouping of items possibly provided more correct categories for the American sample, while the second grouping was more suitable for the Norwegian sample!

Chapter V

DISCUSSION OF OBSERVATIONS

The parents' interest in the study was obvious in both national groups, but the tension in the American subjects, as demonstrated by the lack of initial responses, requests for help, attention seeking (Table 17: "Ease and Tension," Appendix A) was not observed in the Norwegian sample. The American subjects--probably because of experience from nursery school testing and research situations--seemed to regard the task-situations as a test. They were self-conscious, they watched the examiner for clues, etc.; on the other hand, the Norwegian group was eager to play games or try new puzzles and seemed delighted to have a visitor who would bring interesting things for them to do.

The Norwegian subjects were all--except for one boy--very open, easy to get contact with; they initiated the interpersonal relationship between examiner and children and offered information and ideas (related or not to the tasks). In the American sample the children were slow to warm up, but their verbal responses gradually increased during the tasks. After the task-situations, these subjects also responded well, communicated and became more lively and open.

The increasing or decreasing amount of verbal response in the two national groups and the different categories these responses were in, show some of these differences by nationality, although the tapes and recordings started at the beginning of Task I and stopped at the end of Task IV do not demonstrate the full sequence and make the changes less marked.

It was obvious, however, from the sub-group scores, that there were sex differences. These were not consistent, and there were only a few significant trends, for example, the more consistent relationships for All Boys between Mean Age scores and Task Dependency to Mother. The Task-Situation data indicated sub-group differences--one sex group low and one high--within each national sample. This trend was even more marked in the responses and results from Questionnaire I, with the expected mean ages. (See Table 1A and 1B, Appendix A.)

Although it may seem wasteful to discuss sub-groups when the samples are as small as they are in the present study, it seemed important to mention some of the items which might help to clarify the sub-group data. In several cases, as in Q I, No. 1 and No. 3, Norwegian Girls had the lowest sub-group mean score, while Norwegian Boys had the highest. This would mean, as in No. 1 (with the Norwegian Girls having the lowest sub-sample mean, and the Norwegian Boys the highest), that the combined scores would give American children a lower mean age than the Norwegian sample. Girls had a lower mean age than boys, but the difference was not significant. (See Table 1B, Appendix A.)

On No. 11 "At what age should a child get an allowance, and decide how to spend it?" most American and Norwegian mothers' expectancies ranged from ages 6-9. One American mother had the expectancy of age 10. One Norwegian girl's mother, however, answered "age 13-14." This response was so different from all the others that one might possibly assume this mother had a different concept of "allowance," perhaps thinking in terms of the girl's buying certain books, clothes, or toilet articles for herself. If this response had not been included, the mean expected age of Norwegian children would have been significantly lower, $\bar{x}$ = 75.75 months v. American children $\bar{x}$ = 85.25 months. From observations and experience, this lower mean would seem more correct, as Norwegian parents generally give the child an allowance when he starts school, age 6:6 to 7 years, or 72-78 months.

With this "correction," the expected mean score of Girls v. Boys on No. 11 would also have been reversed, Girls $\bar{x}$ 73.5 (instead of 89.2) v. Boys $\bar{x}$ 82.777.

Number 5, "Go to bathroom alone," in which both American sub-samples have the lowest mean ages, led this investigator to speculate along two different lines: One, the different way of dressing the children in the two cultures, generally determined by practical considerations, may logically be taken into account. Norwegian houses are not kept at the same high temperature as American homes, and most of the year children are dressed in more and warmer clothing which may be more inconvenient when the child is going to the bathroom. Since Norwegian children are expected to go to bed alone, however, at an earlier age (including undressing, (cf. Questionnaire I and II), and since Norwegian girls have the lowest expected mean age for dressing, this does not seem to be the reason.

The other line of thought is the different adult attitude in the two cultures toward nakedness of children, privacy in the bathroom, etc. While most Norwegian children up to school age will dress or undress unselfconsciously, both at home and in nursery school (when the Health Department doctors come to examine all of them), go naked on the beach, go to the bathroom with the door open, etc., American children are early taught to be self-conscious about their bodies, not to expose themselves, to wear bathing suits at the beach, and to encourage privacy in the bathroom. Trying tactfully to help American children change pants after an "accident" at school makes one fully aware of how painful this experience is for the children. Therefore, the earlier expected age of American children going to the bathroom alone is probably not so much a demand upon the child's self-mastery as a reflection of the American middle class attitude toward and teaching of "bathroom culture," expressing the fear and shame of exposure. American parents are forced to teach their children early the necessity of privacy--to protect them from the society's indignation.

Sex differences

Because girls are generally considered to mature before boys, it was predicted that the girls would get the lowest mean scores, compared with the boys. Nineteen of the 26 items were in the predicted direction; there was one tie, and in 6 cases the boys got a lower mean age score. (Table 6A and 6B.) On only two of these comparisons of means did T-tests show significant results--No. 2, "Play outside by himself without supervision" and No. 15, "Go to bed alone." In both cases, Girls had significantly lower scores than Boys, $p < .05$. Although No. 26, "Have a friend over to play with indoors (without supervision)" did not reach a significant level ($.05 < p < .1$), there were marked differences between the Girls' and the Boys' scores.

These results seem also to confirm a general hypothesis that girls are expected to be independent at an earlier age. The few significant results give an indication that girls are also considered more reliable and can be trusted more to care for themselves, without getting into difficulties or mischief!

Sub-group mean scores

The indication of girls being expected earlier to independence than boys holds up in the Norwegian sample, only.

Norwegian boys were in three cases only expected to master tasks or situations earlier than Norwegian girls. As Norwegian girls had the lowest expected means on 23 of 26 items, it was interesting to see first in which cases the Norwegian Boys had the lowest expected age means. These were:

No. 16, Play indoors without supervision,
No. 20, Choose which friends he wants to play with, and
No. 11, Get an allowance and decide how to spend it.

American boys, however, were in 11 cases expected to do things or master situations at an earlier age than American girls. (See Appendix A--List of lowest expected mean ages per sub-group.) American girls had lower means than American boys in 15 cases. Not only are American boys expected to dress and feed themselves earlier than are American girls (including ability to tie shoelaces), they are given more freedom earlier, allowed to walk to their friends' homes alone, and are given responsibility at an earlier age. The boys are expected to take care of clothes and toys outdoors and to pick up toys indoors earlier. They are expected earlier to take care of siblings and to watch them in play. American boys are also expected to have small, regular tasks or jobs, to wash or dry dishes, and to be trusted with money at an earlier age than American girls.

Although the T-tests of two means did not give significant results, the differences of means are, in some cases, quite striking.

Sex differences in the two national groups

Assuming that the picture given by the data here is correct, the question immediately arises: Why? Why are American boys expected to do things earlier than girls? The idea of equality in American society (at least, in the middle class) has, during the last two or three generations, caused changes in American middle class family life. A democratic relationship between parents can be expressed (among other ways) by the husband's participation in the family tasks. The earlier differentiation of men's and women-folk's work has disappeared, and it is no longer unmanly to cook or wash dishes. Masculine v. feminine tasks are not stressed, and it is as natural for boys as for girls in American middle class families to participate and "help."

This would seem to stress equality of girls and boys, with equal expectations of both sexes, but it does not explain why boys would be expected to do certain tasks, or master certain situations, earlier than girls, especially since theories of physical maturation and development tend to agree that among pre-school age children, girls are generally earlier developed than boys; girls are toilet trained earlier; general coordination and dexterity are developed earlier in girls than in boys; and girls are usually more mature on the whole.

Nonetheless, reviewing the theoretical viewpoints of factors which promote or restrain development of independence and self-mastery may provide some support for the findings in the American sub-sample.

Sears, Maccoby, and Levin did not find sex differences in dependency but stated that "it is a widely held belief that girls are more dependent than boys." Have the early demands on the American girls--in toilet training, for example (Whiting and Child), been too severe? One wonders if the earlier expectations have been too great, or if the girls have been punished for their dependency (with love-withdrawal or other dependency-promoting techniques). Not being demanded to meet the same early expectations (because of the general viewpoints that they are later in development and maturation than girls), the boys are not under the same pressure, and will therefore develop more self-reliance earlier. Being less dependent, they will be given certain chores and tasks to do independently and will take more responsibility for these.

The data in the Norwegian sub-samples might at first seem to contradict this theoretical explanation. Why would Norwegian girls not become more dependent, if they are expected to do most tasks or master most situations at an earlier age than the boys?

As Bronfenbrenner states in his survey, child-rearing practices in American middle classes during the last two decades have become increasingly more permissive. This trend can also be found in Norwegian child-rearing, but not to the same degree. Most Norwegian books written for parents, on child development and socialization, discuss the problems at a practical level. They stress the importance of the parents' firmness as expressed by giving the child a few, certain rules, which the parents are encouraged to be consistent about and to stick to. They also emphasize that the child has need for limits, for a certain control.

This point of view is supported by Baumrind's study on child-training antecedents. This study proposes that high nurturance with low control will not make the child self-sufficient. Control and nurturance should both be high to produce optimal reliance of strength of will, impulse control, and self-sufficiency. The important point is that "control" is not regarded as or equated with "demands" or "pressure."

Control consists of given rules or limits, "real" or practical, explicitly stated to the child (e.g., "We don't jump on the couch with shoes on"), while demands or pressure are abstract, may not be overtly expressed, and are not messages understood by the child. These are widely different techniques, with very different effects.

Norwegian parents may use more control, e.g., give rules, set limits, but they do not demand or pressure a child to do things earlier than he seems ready for them. Norwegian children have a longer pre-school period than American children. They do not go to grade school till age 6 1/2 or 7, and there is no rush to get quickly through the pre-school period. There is no insistence on children learning early to read or write, for example, a problem about which many American parents are concerned.

Distinguishing between "control" and "demand," one might propose that Norwegian girls (and boys, too) are supported with more control in early childhood, while American girls may have been given more demands and have reacted to these with more dependency. Obviously, this cannot explain all the differences in the data of the two samples. A thorough investigation of the child-training practices in both countries would be needed, and it would probably bring up a number of other important points.

In terms of teaching, there are implications in the present study to support the theoretical views on control and nurturance in regard to independence behaviour. Children who are trained to independence earlier may be more verbal and want a more active exchange of ideas and thoughts with adults, but they may require less support in their play or work. They can be given certain rules or limits and then use their own initiative and ingenuity to find ways and means to solve their own problems.

In making generalizations from the implications in the data, it should be remembered that the samples for this study were chosen from a special segment of the population. Child-rearing practices may be widely different in other segments, especially within the American culture. The Norwegian society is small and quite homogeneous, both in cultural expectations of children and in the child-rearing practices, yet differences do, of course, exist; we do not know how small or how large these are. This study has perhaps generated more questions than answers. But these are important problems in the training to independence behavior of young children. Hopefully, further research and investigation will provide some of the answers.

Chapter VI

SUMMARY OF FINDINGS AND DISCUSSION

Three of the four assumptions of the study were confirmed. Both Questionnaire I, expressing the expected, "cultural" standards of early independence, and Questionnaire II, giving the mothers' actual scores of Independence and Dependency, showed that Norwegian children were expected to master certain tasks or situations at an earlier age and were given more independence by the mother. Mean expected age was lowest for Norwegian children in 23 of 26 items.

Two sample T-tests of means performed on overall means, and means of items in Questionnaire I gave significant results with $p < .005$ for T-test of overall mean scores, and on 9 of the 26 items, $p < .05$. Except for one item, No. 5, "Go to bathroom alone," the other results were all in the predicted direction, with earlier expectations for Norwegian children.

Hypothesis 1, independence training practiced earlier by mothers of Norwegian children, was confirmed by T-tests on two sample means from Questionnaire II, overall Independence Score, with $p < .001$. The mean score of independence was almost twice as high for the Norwegian children as mean score for the American children ($N\bar{x} = 11.529$ v. $Am.\bar{x} = 6.418$). The T-test on the means of Dependency Score, Q II, also gave significant result in the predicted direction, with $p < .05$.

There was consistency in the data and the findings in the two questionnaires, shown in inter-correlations of Mean Age Scores, Q I, Independence Score, Q II, and Dependency Score, Q II.

The hypothesized cultural differences were confirmed, and the hypothesized sex differences were found in the Norwegian sample (girls being earlier trained than boys), but not in the American sample.

Analyses of variance show national differences in the data from Task-situations; Task Dependency increased with difficulty of task, and Norwegian children demonstrated less Task Dependency over all tasks.

Inter-correlation programs I and II showed relationships between the Behavior rating items, with somewhat different characteristics for the Norwegian and the American sample. In tasks where both mother and examiner were present, the Questionnaire scores correlated with Task Dependency showed in general a positive relationship in regard to one person, a negative to the other, between these variables.

Inconsistency in data of the sub-samples is puzzling and brings up the question of early pressure versus early training.

Regarding independence-training, the question arises as to why American boys are expected to master certain tasks or situations earlier than American girls (11 out of 26 cases) when most theories would predict the opposite. Again, McClelland's paradox of demand for independence causing the child to become more dependent has to be considered.

Theoretical viewpoints of "demands" or "pressure" versus "control" may suggest certain useful factors to be considered in answering the questions but cannot give a full theoretical explanation of the problems.

More research, with larger samples, also from different segments of the population, and with variables including emotional independence and cognitive and social aspects, may yield some of the answers this investigator is searching for. Further investigation of the different socialization processes in the societies involved will also help to clarify the problems of the different expectations in training to independence, and, hopefully, will give a fuller and more correct picture of this important part of the young child's socialization.

APPENDIXES

Table 1A. Expected Mean Ages in Months. Questionnaire I

"At what age do you expect a child, (any child) to be able to . . ."

		Norwegian		American	
		Girls	Boys	Girls	Boys
1.	Dress himself	41.63	52.67	45.43	44.7
2.	Play outside by himself, without supervision	35.63	42.33	36.86	44.7
3.	Try hard for himself, without asking for help	39.0	48.33	44.57	46.67
4.	Feed himself, all meals	27.0	27.33	30.43	25.6
5.	Go to the bathroom alone	39.38	46.67	36.86	37.8
6.	Make his own bed	63.0	64.68	72.86	76.0
7.	Be trusted with money (Go to store, etc.)	54.0	59.33	71.14	60.67
8.	Watch younger sibling in outdoor play	66.0	68.0	86.57	78.0
9.	Take care of clothes and toys outdoors	45.75	53.0	61.71	55.67
10.	Walk alone to his friends in neighborhood	41.25	45.67	57.43	55.2
11.	Get an allowance and decide how to spend it	94.5	78.67	83.14	86.89
12.	Make his own breakfast or lunch	66.75	75.33	81.43	84.67
13.	Clean up when he spills or drops	43.13	47.33	55.71	61.33
14.	Tie his own shoelaces	57.38	65.33	67.71	64.2
15.	Go to bed alone (Brush teeth, etc.)	52.88	63.67	66.86	76.67
16.	Play indoors without supervision (When mother is working in the house)	33.75	32.67	36.86	40.5
17.	Find things to do or something to play with	30.0	38.33	41.14	38.1
18.	Have small, regular tasks or jobs (Empty ashtrays, etc.)	42.75	47.33	60.86	57.3

Table 1A (Contd.)

		Norwegian		American	
		Girls	Boys	Girls	Boys
19.	Go with message to neighbor	47.25	49.0	52.29	55.2
20.	Choose which friends to play with	49.88	43.33	46.29	49.5
21.	Decide when and what to play with peers	44.25	44.33	48.86	51.0
22.	Be alone at home while mother goes on an errand	52.5	54.67	79.71	88.0
23.	Pick up his toys	36.75	44.33	50.57	48.0
24.	Wash or dry dishes	51.75	58.67	85.71	76.67
25.	Walk alone to family friends in neighborhood	43.5	49.33	48.86	55.2
26.	Have a friend over to play with indoors, without supervision	43.5	49.0	47.14	60.0

Table 1B. Expected Mean Age Scores, in Months. Questionnaire I

By Nationality and by Sex

	Norw. vs. Am.		Girls vs. Boys	
Item No. 1	47.47	45.0	43.4	48.47
2	39.18	41.47	35.53	43.58 ***
3	43.94	45.75	41.6	47.5
4	27.18	27.59	28.6	26.42
5	43.24	33.47 **	38.2	42.0
6	63.88	70.24	67.6	70.33
7	56.82	61.41	62.0	60.0
8	67.06	81.75 *	75.6	73.0
9	49.59	58.31	53.2	54.33
10	43.59	56.12 *	48.8	50.68
11	86.12	85.25	89.2	82.78
12	71.29	83.25 *	73.6	80.0
13	45.35	58.88 *	49.0	54.33
14	61.59	65.65	62.2	64.74
15	58.59	72.38 *	59.4	70.17 ***
16	33.18	39.0	35.2	36.79
17	34.41	39.35	36.2	38.21
18	45.18	58.76 *	51.2	52.58
19	48.18	54.0	49.6	52.26
20	46.41	48.18	48.2	46.58
21	44.29	50.06 *	46.4	47.67
22	53.65	84.38 *	65.2	71.33
23	40.76	49.25	43.2	46.17
24	55.41	80.63	67.6	67.67
25	46.59	52.59	52.67	52.42
26	46.41	58.13	45.2	57.83
Overall means:	49.97	58.22 ****		

By two-sample T-tests,
* Significant result--mean age score lower in Norw. sample.
** Significant result--mean age score lower in Am. sample.
*** Significant result--mean age score lower for Girls.
**** Significant result--probability level $p < .005$.

Table 4. Analysis of Variance II

Unweighted Means Analysis Based on Lindquist Type VI

Source of Variation	df	Mean Square	f
Between	33	--	--
Sex	1	22.690	< 1
Nationality	1	49.455	< 1
Sex x Nationality	1	20.293	< 1
Error	30	75.075	--
Within	374	--	--
Task	3	463.419	13.915 ***
Task x Sex	3	5.939	< 1
Task x Nationality	3	70.391	2.114
Task x Sex x Nationality	3	6.049	< 1
Task Error	90	33.303	--
Score	2	972.209	46.249 ***
Score x Sex	2	28.516	1.356
Score x Nationality	2	3.069	< 1
Score x Sex x Nationality	2	48.482	2.306
Score Error	60	21.021	--
Task x Score	6	179.464	22.360 ***
Task x Score x Sex	6	10.948	1.364
Task x Score x Nationality	6	84.329	10.507 ***
Task x Score x Sex x Nationality	6	10.945	1.364
Task x Score Error	180	8.026	--

*** $p < .001$

Table 5, A - B. Behavior Items

Items 1, 2 and 7, Task Dependency Items.
Items 3, 4, 5 and 6, Curiosity--Information Items.
Items 18, 19, 20, 21 and 22, Egocentric Speech.

5A. Mean Scores per Sub-group per Task

		Norwegian		American	
		Girls	Boys	Girls	Boys
Task I.	Item No. 1	0	0	0	.2
	2	1.38	.22	.86	.4
	7	0	0	.14	.4
	3	2.5	.56	.14	.8
	4	1.13	1.0	1.43	.1
	5	1.13	2.22	.14	.2
	6	8.75	6.78	2.29	2.5
	18	.63	.89	.14	.5
	19	.13	0	0	0
	20	0	0	0	0
	21	0	0	0	.1
	22	0	0	0	0
Task II.	Item No. 1	.63	.44	.43	.8
	2	.63	.33	.29	0
	7	.25	.44	.57	0
	3	.25	.44	.14	0
	4	.38	.33	.57	.1
	5	.5	.44	0	0
	6	2.88	2.56	3.29	1.3
	18	4.25	1.78	2.43	2.2
	19	.13	.11	0	0
	20	2.0	2.11	.43	.4
	21	0	0	0	0
	22	.5	.11	.29	.3
Task III.	Item No. 1	0	0	0	.33
	2	.63	.33	.86	1.0
	7	.38	0	.71	.33
	3	.25	1.11	.14	0
	4	.88	1.22	.71	.44
	5	1.75	.78	.14	.22
	6	4.38	5.0	5.57	4.67

Table 5A. (Contd.)

		Norwegian		American	
		Girls	Boys	Girls	Boys
Task III.	Item No. 18	1.25	1.11	.86	1.22
	19	0	0	0	.11
	20	0	0	0	0
	21	0	0	0	0
	22	0	0	.14	0
Task IV.	Item No. 1	.13	.44	3.86	2.6
	2	.63	.44	1.86	2.5
	7	1.0	1.22	1.86	2.2
	3	1.0	2.22	.14	.5
	4	.5	2.11	1.0	1.6
	5	.63	.33	.14	.3
	6	4.25	3.56	6.86	3.9
	18	5.75	3.33	4.86	6.7
	19	.38	0	0	0
	20	3.13	4.78	2.14	.9
	21	0	.11	0	.2
	22	.88	.56	.14	1.1

5B. Mean Scores per Sub-group over All Tasks

	Norwegian		American	
	Girls N = 8	Boys N = 9	Girls N = 7	Boys N = 10
Item No. 1	1.875	.889	4.286	3.93
2	3.25	1.333	3.857	3.90
7	1.625	1.666	3.286	2.93
3	4.0	4.333	.571	1.3
4	2.875	4.666	3.714	2.24
5	4.0	3.777	.429	.72
6	20.375	17.889	18.0	12.37
18	11.875	7.111	8.286	10.62
19	.625	.111	0	.11
20	5.125	6.889	2.571	1.3
21	0	.111	0	.3
22	1.375	.667	.571	1.4

Table 6. Analysis of Variance III
Ratio-Scores From Task-Situations
Unweighted Means Analysis Based on Lindquist, Type III

Task Dependency.

Source of Variation	df	Mean Square	f
Between Ss	33	--	--
Nationality	1	.969	3.388
Sex	1	.217	< 1
Nationality x Sex	1	.050	< 1
Between Error	30	.286	--
Within Ss	102	--	--
Task	3	.985	7.138 ***
Task x Nationality	3	.367	2.659 *
Task x Sex	3	.056	< 1
Task x Nationality x Sex	3	.033	< 1
Within Error	90	.138	--

* p almost .05

*** $p < .001$

Curiosity. Gives and Asks for Information.

Source of Variation	df	Mean Square	f
Between Ss	33	--	--
Nationality	1	16.493	6.537 **
Sex	1	.777	< 1
Nationality x Sex	1	.910	< 1
Between Error	30	2.523	--
Within Ss	102	--	--
Task	3	11.199	16.421 ***
Task x Nationality	3	1.960	2.874 *
Task x Sex	3	.175	< 1
Task x Nationality x Sex	3	1.211	1.776
Within Error	90	.682	--

* $p < .05$

** $p < .025$

*** $p < .001$

Table 6 (Contd.)

Total Verbalisation.

Source of Variation	df	Mean Square	f
Between Ss	33	--	--
Nationality	1	18.414	2.970
Sex	1	1.228	<1
Nationality x Sex	1	.142	<1
Between Error	30	6.201	--
Within Ss	102	--	--
Task	3	5.701	5.383 *
Task x Nationality	3	2.085	1.969
Task x Sex	3	.559	<1
Task x Nationality x Sex	3	1.214	1.146
Within Error	90	1.059	--

* p .05

Table 7A. Intercorrelations I

QI, Mean Age correlated with QII, Independence Score and Dependency Score

By Nationality and By Sex

	Total	Nationality		Sex	
	All Ss	Norw.	Am.	Girls	Boys
A1. QI Mean Age x QII Independence Score	-.678(33) $p < .005$	-.585(17) $p < .01$	-.478(16) $p < .05$	-.798(15) $p < .005$	-.508(18) $p < .025$
A2. QI Mean Age x QII Dependency Score	+.535(31) $p < .005$	.347(15)	.238(16)	.612(15) $p < .01$	.464(16) $p < .05$

Table 7B. Intercorrelations I

QI, Mean Age correlated with QII, Independence Score and Dependency Score

By National Sub-groups

	Norwegian		American	
	Girls	Boys	Girls	Boys
B1. QI Mean Age x QII Independence Score	-.482(8)	-.594(9) $p < .05$	-.839(7) $p < .005$	-.042(9)
B2. QI Mean Age x QII Dependency Score	.126(8)	.646(7) $p < .05$	.509(7)	-.016(9)

Table 8A, B, C. Intercorrelations I

Task Dependency to Mother and to Examiner related to:

QI, Mean Age
QII, Independence Score
QII, Dependency Score

	Total All Ss	Nationality Norw.	 Am.	Sex Girls	 Boys
8A. QI Mean Age x Task Dependency to Mother					
Task I	-.289	-.621(10) p <.025	.186	-.428	.169
Task II	-.227	-.086	-.189	-.299	.643(9) p <.025
QI Mean Age x Task Dependency to Examiner (Mother present)					
Task I	-.081	.522(10) p <.05	-.083	-.435	.163
Task II	.272	.712(7) p <.025	.363	.200	.383
8B. QII Independence Score x Task Dependency to Mother					
Task I	.254	.616(10) p <.025	-.420	.395	.464(13) p <.05
Task II	.446(20) p <.025	.392	.450	.517(10) p <.05	-.347
QII Independence Score x Task Dependency to Examiner (Mother present)					
Task I	.321	-.654(10) p <.025	.445(14) p <.05	.668(11) p <.01	.133
Task II	-.014	.842(7) p < .005	.027	-.000	-.018

Table 8A, B, C. (Contd.)

	Total	Nationality		Sex	
	All Ss	Norw.	Am.	Girls	Boys
8C. QII Dependency Score x Task Dependency to Mother					
Task I	-.209	-.363	.110	-.342	.169
Task II	-.452(20) p <.025	-.343	-.508(13) p <.05	-.649(10) p <.025	-.021
QII Dependency Score x Task Dependency to Examiner (Mother present)					
Task I	-.366(22) p < .05	.501	-.356	-.760(11) p <.005	.023
Task II	-.043	.906(7) p < .005	-.222	-.208	.044

Table 10. Individual Means and Sub-group Means of Ratio-scores, from Behavior Rating List Categories

	Norwegian		American	
	Girls	Boys	Girls	Boys
A. Task Dependency Items No.	.587	0.	.471	.286
1, 2, and 7 combined	.320	.524	.667	.190
	.049	.275	.056	2.122
Individual Means	.167	.263	.860	.296
	.348	.053	.524	.968
	.394	0.	.484	0.
	.377	.316	.340	.245
	.137	.146		.259
		.107		.6
				0.
Group Means	$\bar{x}$ = .297	.187	.486	.497
B. "Gives and wants information"	1.6	.571	.275	.571
No. 3, 4, 5, and 6 combined	1.8	1.905	1.333	.429
	.878	3.098	.111	2.204
Individual Means	1.033	2.632	.989	.590
	1.087	2.187	1.714	1.347
	2.31	.091	1.387	.03
	1.358	1.0	.936	.776
	.821	.439		.547
		1.067		.56
				.419
Group Means	$\bar{x}$ =1.361	1.443	.964	.747
C. Total Verbalization	3.147	.679	.824	2.082
	3.28	3.619	2.41	1.048
	.927	4.588	.222	5.714
Individual Means	1.833	4.053	2.624	1.049
	2.826	3.147	2.714	2.947
	3.549	.091	3.065	0.03
	2.604	2.368	1.447	2.082
	1.436	.878		1.410
		1.6		2.080
				.419
Group Means	$\bar{x}$ = 2.45	2.335	1.901	1.886

Table 12. Intercorrelations II, of Task Dependency Items
No. 1, 2, and 7, Using Ratio-Scores
A. By Nationality and Sex,
B. By Sub-groups

A. Items No.	Total All Ss	Nationality Norw.	 Am.	Sex Girls	 Boys
1 x 2	.633 p < .001	.025	.704 p < .001	-.167	.890 p < .001
1 x 7	.157	.357 p < .1	.046	.549 p < .025	.078
2 x 7	-.140	-.028	-.218	-.066	-.160

B. Items No.	Norwegian Girls	 Boys	American Girls	 Boys
1 x 2	-.203	.497	-.301	.906
1 x 7	.807	.235	.253	.021
2 x 7	-.416	.497	-.028	-.246

Table 13. Intercorrelations II, with Ratio-Scores, Using Task Dependency Items No. 1, 2 and 7, with Information-Curiosity Items No. 3, 4, 5 and 6

	Total	Nationality		Sex	
	All Ss	Norw.	Am.	Girls	Boys
Item No. 1 x 3	.419 $p < .01$	.241	.817 $p < .001$	.080	.509 $p < .025$
No. 4	-.142	-.232	-.078	-.174	-.134
No. 5	-.090	.125	.737 $p < .001$	-.275	-.013
No. 6	.107	-.093	.452 $p < .05$	.147	.097
Item No. 2 x 3	.557 $p < .005$	.263	.882 $p < .001$	.053	.723 $p < .001$
No. 4	.253	.125	.398	.686 $p < .005$	.035
No. 5	.016	.053	.603 $p < .005$	.241	.151
No. 6	.110	.292	.147	-.024	.182
Item No. 7 x 3	-.098	.328	-.190	-.148	-.092
No. 4	.108	.309	.080	.002	.150
No. 5	.010	.408 $p < .05$	.151	-.415	.124
No. 6	.386 $p < .025$	.526 $p < .025$	.537 $p < .025$	.366	.434 $p < .05$

Table 16. Mean Time, in Minutes, per Task, per Sub-group

	Task I	Task II	Task III	Task IV
Norw. Girls	6.0	5.3	3.16	9.38
Norw. Boys	6.0	4.25	2.81	8.33
Am. Girls	5.5	4.46	3.36	9.79
Am. Boys	5.7	4.5	4.39	10.98

Table 17. Ease and Tension During Task-Situations
Raw scores per sub-group, over all tasks

	Norwegian		American	
	Girls N=8	Boys N=9	Girls N=7	Boys N=10
A. Ease				
No. 25. Singing and humming	5	11	23	4
No. 26. Laughter	22	15	9	5
B. Tension				
No. 7. Statement of difficulty	13	15	23	30
No. 8. Verbal escape	0	1	2	3
No. 13. Leaves task	0	0	2	2
No. 23. Crying or whining	0	0	1	2
No. 24. Sighing	16	35	37	48

Appendix B

Mothers' Questionnaire I
Culturally Expected Standards

At what age do you expect a child (any child) should be able to:

1. Dress himself (not outdoor clothes)
2. Go outside to play by himself without supervision
3. Try hard for himself (in tasks) without asking for help
4. Feed himself, all meals
5. Go to bathroom alone
6. Make his own bed
7. Be trusted with money (to go to store, take money to N.S., to pay your neighbor for package which arrived, etc.)
8. Watch younger sibling in outdoor play
9. Take care of toys and clothes outdoors
10. Walk alone to family friends in neighborhood
11. Get an allowance and decide how to spend it
12. Make his own breakfast or lunch
13. Clean up when he spills or drops
14. Tie his own shoelaces
15. Go to bed alone (incl. washing and brushing of teeth)
16. Play indoors without supervision (when mother is working around the house)
17. Find things to do or something to play with
18. Have small (regular) tasks or jobs (take in newspaper, empty ashtray, etc.)
19. Go with message to neighbor

20. Choose which friends he wants to play with

21. Decide when and what to play with peers

22. Be alone at home while mother goes on errand

23. Pick up his toys

24. Wash or dry dishes

25. Walk alone to friends in neighborhood

26. Have a friend over to play with indoors, without supervision

Questionnaire

Each question has 3 possibilities. Please answer 1 "yes" and 2 "no's" for each question.

	YES	NO
When X is playing indoors, alone, do you:		
a. expect him to play by himself	____	____
b. play with him	____	____
c. take some time to play with him and tell him to play by himself the rest of the time	____	____
When X has a friend over do you:		
a. supervise their play all the time	____	____
b. let them play alone	____	____
c. watch them at times to see what is going on	____	____
When X wants to go and play with a friend in the neighborhood do you:		
a. let him walk alone	____	____
b. take him there	____	____
c. call up the other child and ask him to come to your house	____	____
When X wants to bring his toys to the playground to play with do you:		
a. expect him to take care of them and bring them home	____	____
b. go and pick them up for him	____	____
c. tell him to leave the toys at home	____	____

	YES	NO
When X is playing with a friend and they have an argument do you:		
a. let them work it out by themselves	____	____
b. stop the argument	____	____
c. bring in new objects or ideas to divert their attention	____	____
When X is playing outdoors do you:		
a. keep an eye on him, on and off	____	____
b. go outside with him	____	____
c. let him play by himself	____	____
If X has smaller brother or sister do you:		
a. let X watch the smaller one during outdoor play	____	____
b. go out and watch the smaller one yourself	____	____
c. let X take responsibility for the younger one while you are within reach	____	____
If X has older brother or sister do you:		
a. encourage X to do things the older ones can do (dress himself, do small jobs, etc)	____	____
b. point out that he is smaller and can't do certain things	____	____
c. encourage him to do other things which he can more easily manage by himself	____	____
If X usually wakes up before you in the morning do you:		
a. encourage him to get up and play and let you sleep	____	____
b. tell him to stay in his bed till you wake up	____	____
c. let him come into your bed if he is quiet	____	____
When it is mealtime (breakfast, lunch, or X's individual supper) do you:		
a. make ready certain things you want X to eat	____	____
b. decide together when X is there what to make and have him help you	____	____
c. let him fix his own meal if it is simple (cereal, sandwich) and he can find things by himself	____	____

	YES	NO
When X is eating or "helping" you and he spills do you:		
a. quickly wipe it up	___	___
b. encourage X to clean it up, by giving him sponge, cloth, etc.	___	___
c. let him wipe first, but show him you have to go over it and do it properly	___	___
If X wants to help you around the house do you:		
a. tell him he has to wait till he is older	___	___
b. give him small jobs he can do by himself (dusting, drying silver, etc.)	___	___
c. tell him he has to do the same thing you are doing and give him a small part of it	___	___
If X wants to do certain small jobs at home do you:		
a. ask him to do it occasionally	___	___
b. drop it if he gets tired of it	___	___
c. expect him to do it regularly	___	___
If X gets an allowance or money for a job do you:		
a. let him decide alone what to do with it	___	___
b. tell him to save it or plan the way he should use it	___	___
c. have a planned arrangement with X to save some and let him spend the rest as he wishes	___	___
In regard to money, do you think:		
a. X is old enough to understand that things have value and one pays for them and one can save for things one wants	___	___
b. it is better to tell X about money when he gets older	___	___
c. to let him have money now and then just to play with	___	___
When X is getting dressed do you:		
a. expect him to practice and manage hard things like buttons, tie shoelaces	___	___
b. do it for him, so he gets quickly dressed	___	___
c. let him do easy things and do the hard parts yourself	___	___

	YES	NO
When X gets to bed at night do you:		
a. tell him you'll come up (or in) when he is undressed	____	____
b. undress him yourself	____	____
c. encourage him to manage a little and help him with the rest	____	____
When you have to run an errand or go for short visit in neighborhood do you:		
a. take X with you	____	____
b. have him to play by himself for short period	____	____
c. get someone to look after him	____	____
If X is invited to go on trip with relatives he knows, or for a weekend with grandparents or friends, do you:		
a. feel you should be there with him	____	____
b. let him go but come after yourself	____	____
c. let him spend entire time without your presence	____	____
If you had a dentist appointment, couldn't be home when he walks home (or comes with car pool) would you:		
a. give him a key to get in	____	____
b. ask him to go to neighbor and wait	____	____
c. pick him up and take him with you	____	____
If X is interested in some outdoor activity like bicycling, skiing, skating, roller-skating, do you:		
a. expect him to go out and practice by himself	____	____
b. ask him to wait till you or his father can go with him	____	____
c. suggest he finds a friend to practice with	____	____
When X is sick and has to stay in bed do you:		
a. expect him to entertain himself for awhile	____	____
b. sit at the bedside most of the time	____	____
c. go back and forth between kitchen and sick bed	____	____
Apart from the nightly cleaning and scrubbing (if this is necessary!) do you:		
a. let X be responsible for toileting, washing of hands, brushing teeth	____	____
b. feel you should be present in all these situations helping him	____	____
c. do you keep an eye on his processes, without interfering	____	____

Behavior Rating List for Mother-interaction with Child

1. Mother gives suggestions for task.
2. Mother offers help with task.
3. Mother offers other help (other types).
4. Mother gives praise.
5. Mother gives encouragement.
6. Mother provides physical support.
7. Mother leaves situation.
8. Mother present but passive.

Mother Interaction in Task I and Task II

	Task I				Task II			
	Norw.		Am.		Norw.		Am.	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Total number of mothers present	5	5	6	8	4	3	6	7
a. Passive mothers	4	4	2	4	2	3	2	5
b. Interacting mothers	1	1	5	4	2	-	4	2
Categories of mother interaction: Total number of responses								
a. Categories 1, 2, 3 and 6	-	-	4	5	-	-	6	5
b. Categories 4 and 5	3	2	9	7	11	-	14	3

Correlations of the Ratings of the Task Situations

The present study was planned such that the main investigator would record on recording-sheets the subjects' behavior during the task-situations with the examiner and with the mother. The behavior including all verbal responses would then be noted by the investigator and a co-rater.

During the pilot study the first few subjects were rated only on 8 behavior items, which were set up ahead of time. This small group of items proved highly inadequate, however, for a thorough and complete recording of the child's total behavior. The list of items on the behavior rating scale was expanded to include a total of 27 items (see Appendix A). The behavior of every subject in the study was rated according to this list in each of the four task-situations.

As this investigator wanted to use the hand-recorded responses in the further examination of the data, the investigators agreed upon the following procedure: The examiner would keep a running recording of the child's behavior and responses. Simultaneously, a tape-recorder would be used to record the responses, in order to obtain a correlation of the hand-recorded and tape-recorded responses. In this way we would get 1) a measure of validity of the hand-recording compared with the tape-recording and 2) a correlation of the taped responses as rated independently on the recording sheets, by the investigator and the co-rater. If both of these correlations were good, it would then seem valid to use the investigator's hand-recordings as a material accurate enough to work with.

All the responses of the American and the Norwegian subjects were both hand-recorded and tape-recorded. For the correlations only tape-recorded responses of American subjects were used, however; as it proved too difficult for the American-Norwegian co-rater to understand the Norwegian dialects from the tapes.

Although there were 17 American subjects in the study, tapes from only 10 children were used. One disadvantage in testing the children in their homes was the lack of control over sounds and noise in the homes. The other tapes were not possible to use, as sounds of siblings and various noises in the house intruded and disturbed the tape-recording in most of these cases. In a couple of cases, the first tape-recorder which was used, had not functioned properly. Of the 10 American subjects, two were rated on three task-situations instead of four, as other sounds disturbed and made it impossible to interpret these two task-situations in a meaningful way. Thus, the correlations were based on ratings of altogether 38 task-situations.

Procedure.

The investigator and the co-rater have taught together at the Gesell Nursery School. Both are trained to record tests and to rate responses. The raters decided that the best procedure for obtaining the full responses from the tapes, and accordingly, the most correct rating, was to transcribe the tapes and to rate the behavior from this transcription. This was done independently by the two raters, one in Connecticut, one in Chicago.

Some of the behavior-items, as No. 9, 10, and 11 and No. 14, 15, and 16 were rated from the hand-recording but not from the tapes, as the physical behavior of the child might not be revealed on the tape-recording.

Using L. Kohlberg's and E. Zigler's Dependency Rating Scale, the items were grouped in three main categories:

Category I - Task Dependency included 5 items:

No. 1, 2, 5, 6, and 7. These items were weighted with 3.

Category II - Non-Task Dependencyincluded 2 items:

No. 3 and 4. These items were weighted with 1.

Category III - Ego-Centric Speech included 6 items:

No. 17-22. These items were weighted with 0.5.

Analysis of Variance with weighted scores was computed (Appendix A).

Correlations of these categories were done separately in order to determine if any one category might be more or less hard to define and to rate, than the responses in the two other categories. The fourth correlation was a total correlation, excluding only items No. 9-16. (See Chapter II, Correlations of Ratings.)

The three relatively high correlations can probably be attributed to the two raters' earlier experiences of working closely together; of common training and of teaching and handling children in much the same ways.

This investigator's tape-ratings were now correlated with the hand-recorded ratings, done three months apart. This correlation (Total correlation--minus items No. 9-16)--was +.97--probably less surprising than the other correlations, as these ratings were done by the same person.

In this case, where the investigator tested the subjects in their own homes, it was a great advantage to use the hand-recording for the further examination of the data. The hand-recording could here yield fuller information for items No. 9-16, which in most cases could not be accurately rated from the tape-recorder. It could also give added descriptions of the mother-child relationship where special incidents might be worth noticing. Secondly, when the examiner neither has a choice of rooms, nor control over other events happening, in the home, (siblings screaming, dogs running and barking, etc., etc.) the tape-recorder is good as an assisting tool, but would not function satisfactorily as the main one.

Information About Subjects

Family size and sibling order:

	Families with 4 children:
Norwegian Girls	2
Norwegian Boys	2
American Girls	0
American Boys	2

	Families with 3 children:
Norwegian Girls	3
Norwegian Boys	2
American Girls	4
American Boys	4

	Families with 2 children:
Norwegian Girls	3
Norwegian Boys	5
American Girls	3
American Boys	4

	1st born child in family:
Norwegian Girls	2
Norwegian Boys	1
American Girls	1
American Boys	4

	2nd born child in family:
Norwegian Girls	3
Norwegian Boys	7
American Girls	3
American Boys	5

	3rd born child in family:
Norwegian Girls	2
Norwegian Boys	1
American Girls	3
American Boys	1

	4th born child in family
Norwegian Girls (only)	1

IQ Measures

On the Draw-a-man test, the Norwegian scores ranged from 109-156, the American scores from 111-177. The mean scores of the sub-groups were (in Standard Scores):

Norwegian Girls	-	$\bar{x}$	133.75
Norwegian Boys	-	$\bar{x}$	139.78
American Girls	-	$\bar{x}$	130.57
American Boys	-	$\bar{x}$	135.22

In terms of the sub-group means, there was little difference between the sub-groups--the difference between the lowest and the highest sub-groups means being 9.22 points.

On the Q.T. test, the combined form scores were used to find the mean mental age of the sub-groups.

Converting the score with decimal points into years and months for computation of I.Q. score, the Q.T. scores were as follows:

Norwegian Girls	$\bar{x}$ C.A. (in months)	57.5	$\bar{x}$ MA	4;5	$\bar{x}$ I.Q.	92.17
Norwegian Boys	$\bar{x}$ C.A.	57.1	$\bar{x}$ MA	5;4	$\bar{x}$ I.Q.	112.08
American Girls	$\bar{x}$ C.A.	56.7	$\bar{x}$ MA	4;4	$\bar{x}$ I.Q.	91.71
American Boys	$\bar{x}$ C.A.	57.3	$\bar{x}$ MA	4;4	$\bar{x}$ I.Q.	90.75

One American girl completed only two of the three forms, therefore the mean score for that sub-group is computed from the scores of 6 subjects.

Mean I.Q. of all American children on the Q.T. test was 91.07 (M.A. 4;4); of the Norwegians, the mean I.Q. was 101.22 (M.A. 4;10).

Comparing the two test results of the individual subjects and of the sub-groups, one finds that the scores on the two tests show remarkably different results for groups and individual subjects, in both samples. The incongruity between these results seems to call for a careful study of the two instruments which were used. Without trying to correlate such different scores, this investigator has tried to analyze the reasons for this divergence.

The QT scores were computed from the three single forms, in accordance with the scoring manual.

First, this investigator wanted to find out if the QT test, having been translated, might have been biased toward one sample or the other. Careful analyses were done on all individual scores on the three single forms, on the first 20 items (through age level 7) on each form, 60 items in all. American children were compared with Norwegian children, Boys v. Girls. All individual scores were thus added up in several ways. If 50 per cent or more of the children in each group (by nationality or sex) missed out on one item, this item was counted as a minus item (50 per cent arbitrarily chosen as cut-off point).

American children missed out on 8 items, Norwegian children on 9 items, on Form I. Seven of these minus items were identical for the two groups. On Form II, both American and Norwegian children missed out on 4 items, having all 4 minus items in common. On Form III, American children missed out on 5 items; 4 Norwegian children missed out on 4 of these.

Form I	Form II	Form III	All Forms
American - 8 items	4 items	5 items	17
Norwegian - 9 items	4 items	4 items	17
In common: 7 items	4 items	4 items	15

By nationality, 15 items were thus minus items both samples had in common--each sample having 17 minus items.

By sex, 17 of 18 minus items were shared by the sub-samples of boys and girls.

	Form I	Form II	Form III	All Forms
Boys	8	5	4	17
Girls	8	5	5	18
In common	8	5	4	17

The analyses of minus items in the QT test seems to indicate 1) that no national sample had obvious advantages; the Norwegian translation was not significantly harder or easier than the English version of the test; 2) the minus items on the test showed no significant differences by sex.

As the QT scores in general were surprisingly low, this investigator looked for more general reasons for the present test results. One obvious reason seems to be the test material itself. The original QT picture-sheet was not available, only a Xeroxed copy which did not have a very sharp outline of the items.

In two cases (AC and ND) these subjects had a history of visual difficulties and quite severe visual defects. This might in these two cases account for the rather poor results on a visually oriented test (4:5 and 3:0 respectively.) Their Standard scores on the drawing test were 130 and 141!

Fifty per cent of the children, by nationality and by sex, missed out on 15 items, of which six were marked "easy."

The "easiness" of these particular items can be discussed but there is reason to believe that many of them were too difficult to detect visually in the present material.

In the Draw-a-man test, there was a large variance in the scores, individual scores ranging from 109-177. The sub-group mean scores, however, were not very different; American girls had the lowest sub-group mean, $\bar{x}$ 130 (57 points), and the Norwegian boys had the highest, $\bar{x}$ 139 (78 points).

As Dale B. Harris points out in his manual for test and scoring, the age group under 5 years (NB: 5 years = 5:0-5:11), which were used in setting the norms, were less representative than the other age samples. He warns that the standard scores given the younger age samples under 5 years are "likely to be a little high" and are meant to be "offered as tentative guides for use with pre-school groups."

Considering a re-evaluation of the Standard scores, with scores somewhat lower than the present ones, one could still regard the mean sub-group scores as higher than average. (Mean 100, One SD = 15). How much lower the scores ought to be set is not possible to evaluate at present. This investigator feels, however, that the drawing test still gives the best picture, in this case, of the niveau of the two samples' mental abilities, corresponding with the DQ of the American sample and with the Nursery School teachers' evaluations.

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